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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,843	04/27/2001	Claudiu D. Pruteanu	20010142.ORI	2768

23595 7590 04/22/2005  
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MINNEAPOLIS, MN 55402

EXAMINER
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KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/844,843

**Applicant(s)**

PRUTEANU ET AL.

**Examiner**

James Keenan

**Art Unit**

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 51-53,55-57,59-62,64-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 51-53,55-57,59-62,64-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christenson (US 5,931,628) in view of Brandt (US 5,851,100), both of record.

Christenson shows the invention essentially as claimed, including telescoping boom 94, 96, pivotally mounted mechanized arm arrangement 140 (fig. 8 embodiment) of one-piece curved construction which at least to some extent inherently reduces the lift-and-dump radius, as broadly claimed, and includes double-acting reversible hydraulic linear actuator 146, container grabber device 160 carried by the free end of the arm, actuators 98 and 168-174 for operating the boom and grabber device, respectively, and an inherent control system.

Christenson does not show boom and arm position sensing systems.

Brandt, as previously described, shows a similar container handling system including boom and arm position sensing systems 150, 152, respectively.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Christenson by adding boom and arm position sensing systems, as shown by Brandt, as this would allow automatic, smooth, and efficient lifting and dumping of containers.

3. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christenson in view of Brandt, as applied to claim 64 above, and further in view of Duell et al (US 6,123,497) and Tordenmalm et al (US 4,896,582), both of record.

Christenson as modified by Brandt does not show a control means to damp the action of the hydraulic cylinder toward the extremes of travel thereof.

As previously described, Duell et al show a mechanically "cushioned" hydraulic cylinder in a similar refuse collection vehicle and Tordenmalm et al show a control system including sensing and braking means for damping a piston as it approaches the end position of travel within a hydraulic cylinder.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Christenson by utilizing a control means for damping the action of the cylinder, as suggested by the combined teachings of Duell et al and Tordenmalm et al, as this would simply be a well known expediency in the art for reducing shock and damage to a piston/cylinder assembly.

4. Claims 51, 55, 56, 60, 61, 65, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christenson in view of Brandt and Sizemore et al (US 5,505,576), of record.

The apparatus of Christenson as modified by Brandt does not show a hydraulic rotary actuator as the means for pivoting the arm relative to the boom.

Sizemore et al, as noted in paper #15, show a refuse collection vehicle with rotary actuator 49 which rotates lift arm 18.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Christenson by substituting the linear hydraulic actuator with a rotary actuator, as Sizemore et al show this to be a well known and art recognized expediency for pivoting a lift arm, the use of which in the apparatus of Christenson would require no undue experimentation and produce no unexpected results.

Re claims 51, 55, and 56, note paragraph 5 of paper #15.

Re claim 66, the addition of mechanical stops is considered an obvious design expediency for safety.

5. Claims 52, 53, 57, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christenson in view of Brandt and Sizemore et al, as applied to claims 51, 55, 56, 60, 61, 65, and 66 above, and further in view of Duell et al.

Christenson as modified does not disclose controlling the speed of the arm based on the sensed position thereof.

Duell et al, as noted previously, shows that controlling the rotational speed of a dumping arm 26 can be at least to some extent based on the output of an arm position sensor AP<sub>1</sub>.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Christenson by controlling the rotational speed of the arm based on the arm position sensor, as suggested by Duell et

al, as this would provide greater efficiency and flexibility when operating in the automatic mode.

6. Applicant's arguments with respect to claims 51-53, 55-57, 59-62, and 64-66 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 571-272-6925. The examiner can normally be reached on Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
James Keenan  
Primary Examiner  
Art Unit 3652

jwk  
4/13/05